

Abstract of the Disclosure

A method and an apparatus for etching a semiconductor device which can perform an etching process without causing electrical and physical damages using a neutral beam generated by a simple apparatus. In the method, ions of an ion beam having a predetermined polarity are extracted from an ion source and accelerated. An accelerated ion beam is reflected by a reflector and neutralized. A substrate to be etched positioned in the path of the neutral beam in order to etch a special material layer on the substrate with the neutral beam. The gradient of the reflector is adjusted to control an angle of incidence of the ion beam incident on the reflector, and a voltage is applied to the reflector to control the path of an incident ion beam.

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